

Attorney's Docket No.: 06618-923001  
Client's Ref. No.: CIT 3685-CIP

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AUG 04 2004

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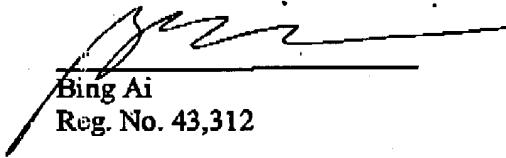
Number of pages Including this page 8

Applicant : Anatoliy Savchenkov et al.  
Serial No. : 10/702,201  
Filed : November 4, 2003  
Title : Optical Filter Having Coupled Whispering-Gallery-Mode Resonators

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Attached to this facsimile communication cover sheet is an Information Disclosure Statement (2 pages) and a Form PTO-1449 (1 page), faxed this 4<sup>th</sup> day of August 2004 to the United States Patent and Trademark Office.

Respectfully submitted,

  
Bing Ai  
Reg. No. 43,312

Date: August 4, 2004

Fish & Richardson P.C.  
PTO Customer No. 20985  
12390 El Camino Real  
San Diego, California 92130  
Telephone: (858) 678-5070  
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Attorney's Docket No.: 06618/923001/CIT 3685-CIP

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AUG 04 2004

Applicant : Anatoliy Savchenkov et al.  
Serial No.: 10/702,201  
Filed : November 4, 2003  
Title : OPTICAL FILTER HAVING COUPLED WHISPERING-GALLERY-MODE RESONATORS

OFFICIAL

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Applicants call attention to the attached Information Disclosure Statement and documents listed on form PTO-1449.

Each document listed on the herewith Form PTO-1449 was cited in the attached PCT Search Report dated July 27, 2004, issued in a foreign counterpart application not more than three months ago. To the best knowledge of the undersigned, this is the first citation of these items in any communication from a foreign patent office in a counterpart foreign application.

The documents are in the English language; hence no concise explanation is necessary per Rule 98(a) (3).

## CERTIFICATE OF TRANSMISSION BY FACSIMILE

I hereby certify that this correspondence is being transmitted by facsimile to the Patent and Trademark Office on the date indicated below.

August 4, 2004

Date of Transmission

Signature

S. Gebhart

Name of Person Signing Certificate

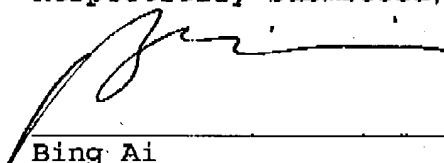
Page 2 of 2

Attorney's Docket No.: 06618/923001

Consideration of the foregoing and enclosure plus the return of a copy of the enclosed form PTO-1449 with the Examiner's initials in the left column per MPEP 609 are earnestly solicited along with an early action on the merits.

Please apply any additional charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,



Date: August 4, 2004

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Reg. No. 43,312

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Telephone: (858) 678-5070  
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10422281.doc

## PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:  
 SCOTT C. HARRIS  
 FISH & RICHARDSON PC.  
 12390 EL CAMINO REAL  
 SAN DIEGO, CA 92130

**PCT**NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

		Date of Mailing (day/month/year)	<b>27 JUL 2004</b>
Applicant's or agent's file reference 06618-923WO1		FOR FURTHER ACTION See paragraphs 1 and 4 below	
International application No. PCT/US03/35131		International filing date (day/month/year) 04 November 2003 (04.11.2003)	
Applicant <b>CALIFORNIA INSTITUTE OF TECHNOLOGY</b>			

1.  The applicant is hereby notified that the international search report has been established and is transmitted herewith.

## Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

Where? Directly to the International Bureau of WIPO, 34, chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2.  The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3.  With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

## 4. Reminders

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90 bis.1 and 90 bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1430 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230 Form PCT/ISA/220 (April 2002)	Authorized office <i>Rodney Sovernick</i> Rodney Sovernick Telephone No. (571) 272-2800 (See notes on accompanying sheet)
--	--

**PATENT COOPERATION TREATY****PCT****INTERNATIONAL SEARCH REPORT**

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 06618-923WO1	<b>FOR FURTHER ACTION</b>	see Notification of Transmittal of International Search Report (Form PCT/ISA/720) as well as, where applicable, item 5 below.
International application No. PCT/US03/35131	International filing date (day/month/year) 04 November 2003 (04.11.2003)	(Earliest) Priority Date (day/month/year) 08 November 2002 (08.11.2002)
Applicant <b>CALIFORNIA INSTITUTE OF TECHNOLOGY</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the Report**
  - a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
    - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
  - b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:
    - contained in the international application in written form.
    - filed together with the international application in computer readable form.
    - furnished subsequently to this Authority in written form.
    - furnished subsequently to this Authority in computer readable form.
    - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
    - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2.  Certain claims were found unsearchable (See Box I).
3.  Unity of invention is lacking (See Box II).
4. With regard to the title,
  - the text is approved as submitted by the applicant.
  - the text has been established by this Authority to read as follows:
5. With regard to the abstract,
  - the text is approved as submitted by the applicant.
  - the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is Figure No. 9A
  - as suggested by the applicant.
  - because the applicant failed to suggest a figure.
  - because this figure better characterizes the invention.

None of the figures

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/35131

## Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

## NEW ABSTRACT

Optical filters (900A) having at least two coupled whispering-gallery-mode (WGM) optical resonators (610,620) to produce a second-order or higher-order filter function with a desired spectral profile. At least one of the coupled WGM optical resonators (610,620) may be tunable by a control signal to adjust the filtering function.

Form PCT/ISA/210 (continuation of first sheet(2)) (July 1998)

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/35131

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : G02B 06/26, 06/42  
 US CL : 385/15

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 385/15,27,28; 372/32,92,96,108

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 INSPEC, IEEE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 whispering gallery mode, (optic\$6 near4 resonat\$6), (alter\$6 or chang\$6) near3 (refract\$6 near3 (index or indices))

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0044739 A1 (VAHALA et al) 18 April 2002 (18.04.2002), see ABS; figures 1A, 4, 9; [0121]-[0126], [0129]-[0132], [0147].	1-23
A, T	US 6,718,083 B2 (LOPES et al) 06 April 2004 (06.04.2004), see ABS; figure 2B; column 6, lines 38-65.	1-23
A, P	US 6,490,039 B2 (MALEKI et al) 03 December 2002 (03.12.2002), see ABS; figure 2; column 5, lines 20-33.	1-23
A	US 6,009,115 A (HO) 28 December 1999 (28.12.1999), see ABS, figures 1A, 9; column 3, line 66, through column 4, line 62; column 9, line 53, through column 10, line 46.	1-23

<input type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
"A"	Special categories of cited documents:	"T"	later documents published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"B"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"C"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"D"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"E"	document referring to an oral disclosure, use, exhibition or other means		
"F"	document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search		Date of mailing of the international search report	
02 May 2004 (02.05.2004)		27 JUL 2004	
Name and mailing address of the ISA/US		Authorized officer <i>Rodney Bovernick</i>	
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Telephone No. (571) 272-2800	

Form PCT/ISA/210 (second sheet) (July 1998)

Sheet 1 of 1

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 06618-9230(01)	Application No. 10/702,201
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))		Applicant Anatoliy Savchenkov et al.	
		Filing Date November 4, 2003	Group Art Unit

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	2002/0044739	4/18/2002	Vahala, et al.			
	AB	6,718,083	4/6/2004	Lopes et al.			
	AC	6,490,039	12/3/2002	Maleki, et al.			
	AD	6,009,115	12/28/1999	Ho			
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

Foreign Patent Documents or Published Foreign Patent Applications							
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes No
	AL						
	AM						
	AN						
	AO						
	AP						

Other Documents (include Author, Title, Date, and Place of Publication)							
Examiner Initial	Desig. ID	Document					
	AQ						
	AR						
	AS						
	AT						

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Disclosure Form (PTO-1449)